REMARKS/ARGUMENTS

Claims 1-8, 10-11, 13-14 and 17-20 are pending in the present application. By this reply, claims 9, 12 and 15-16 have been cancelled and new claims 18-20 have been added.

The specification, drawings and claims have been amended to correct minor informalities and to clarify the invention according to U.S. practice. These changes are fully supported by the original disclosure and do not add any new matter.

Abstract of the Disclosure

At the Examiner's request, a new Abstract is provided. Accordingly, the objection to the Abstract should be withdrawn.

Claim Objection

Claim 9 and 11 have been objected to because of certain minor informalities. Claim 9 has been canceled and claim 11 has been amended to correct these minor informalities. Accordingly, the objection should be withdrawn.

35 U.S.C. § 112, Second Paragraph, Rejection

Claim 17 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 17 has been amended to clarify the invention. Accordingly, the rejection should be withdrawn.

35 U.S.C. § 103 Rejection

Claims 1-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yonemitzu et al. (U.S. Patent No. 5,475,505) in view of Nagai et al. (U.S. Patent No. 5,852,469). This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

Regarding independent claims 1, 7, 11, 14 and 17, the Examiner alleges that Yonemitzu et al. discloses a method/apparatus for recording, reading and/or reproducing data in a zigzag manner. The Examiner cites column 12, line 62 to column 13, line 25, column 6, lines 52-67 and column 7, lines 1-32 of Yonemitzu et al. to support his position. However, Yonemitzu et al., including the cited portions, does not disclose the claimed data blocks and the feature of rearranging, recording the rearranged data, and/or reproducing the recorded data, as required in the independent claims, and merely is directed to an error correction method.

On the other hand, the Examiner relies on Nagai et al. for disclosing the specific zigzag scanning pattern of Applicant's invention. However, Figure 3A of Nagai et al. merely shows an example of scanning orders of DCT

coefficients. Although the scanning of DCT blocks is carried out in a zigzag manner in Nagai et al., the subject matter of Nagai et al. relates to the process of coding the quantized DCT data and has nothing to do with the data blocks and the process of recording or reproducing the data blocks as recited in the claims. That is, in Applicant's embodied invention, the image data (which may be coded by the Nagai et al.'s coding method) has a specific data structure (e.g., DVD data format such as data blocks) and is processed by modulation/demodulation, scambling, descrambling, etc. to be recorded or reproduced to or from an optical recording medium. Therefore, Nagai et al. does not overcome the deficiencies of Yonemitzu et al.

Accordingly, even if the references are combinable, assuming *arguendo*, the combination of references as applied by the Examiner fails to teach or suggest, *inter alia*:

> reading, in a zigzag direction, blocks of data having a predetermined size of byte units arranged in a pre-set number of rows and columns, the blocks including a main data part and an error correction code (ECC) part, the main data part including a data ID part, wherein the blocks are modulated by a predetermined modulation method

as recited in independent claim 1;

> a data processor generating data blocks to be recorded on an optical recording medium from user data, the data blocks having a predetermined size of byte units arranged in a pre-set number of rows and columns, the data blocks including a main data part

and an error correction code (ECC) part, the main data part including a data ID part, wherein the data blocks are modulated by a predetermined modulation method;

a rearranging unit generating rearranged data from the data outputted from the data processor by scanning the data blocks in a zigzag direction

as recited in independent claim 7;

A method for recording data . . ., the data blocks having a predetermined size of byte units arranged in a pre-set number of rows and columns, the data blocks including a main data part and an error correction code (ECC) part, the main data part including a data ID part, wherein the data blocks are modulated by a predetermined modulation method and synchronous data is inserted into the modulated data blocks, comprising the steps of:

scanning the data blocks in a zigzag direction so that the data blocks can be dispersed in a track traverse direction of the optical recording medium

as recited in independent claim 11;

A method for reproducing data . . . including a plurality of data blocks having a predetermined size of byte units arranged in a pre-set number of rows and columns, the data blocks including a main data part and an error correction code (ECC) part, the main data part including a data ID part, wherein the data as recorded on the optical recording medium is arranged as a result of zigzag scanning the data blocks and is distributed in a traverse direction of a

> track in the optical recording medium, comprising the steps of:
>
> . . . arranging the read data in the reverse order of the zigzag scanning

as recited in independent claim 14; and

> An apparatus for reproducing data . . . including a plurality of data blocks having a predetermined size of byte units arranged in a pre-set number of rows and columns, the data blocks including a main data part and an error correction code (ECC) part, the main data part including a data ID part, wherein the data as recorded on the optical recording medium is arranged as a result of zigzag scanning the data blocks and is dispersed in a traverse direction of a track in the optical recording medium, comprising:
>
> . . . a scan unit scanning the data read from the reproducing unit in the reverse order of the zigzag scanning

as recited independent claim 17.

The claims dependent from these independent claims are also allowable due to their dependency. Based on these reasons, reconsideration and withdrawal of the rejection are respectfully requested.

NEW CLAIMS

Claims 18-20 further define the invention as recited in independent claims 14 and 17 and are allowable at least for the same reasons that the

independent claims are allowable. The new claims are fully supported by their original disclosure (e.g., page 13, lines 13-20 of the original specification and original claims 14 and 17).

CONCLUSION

For the foregoing reasons and in view of the above clarifying amendments, Applicant respectfully requests the Examiner to reconsider and withdraw all of the objections and rejections of record, and earnestly solicits an early issuance of a Notice of Allowance.

Should there be any outstanding matters which need to be resolved in the present application, the Examiner is respectfully requested to contact Esther H. Chong (Registration No. 40,953) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Applicant(s) respectfully petitions under the provisions of 37 C.F.R. § 1.136(a) and 1.17 for a three month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of $950.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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JTE/EHC:lmh
Attachments:
Abstract of the Disclosure
Substitute Specification
Marked-Up Substitute Specification
Replacement Sheet of Drawing (new Fig. 9)